CLAIMS

What is Claimed is:

1.   An implantable medical device for detection of changes in physiologic parameters, comprising:

     means for generating measured physiologic parameters;

     means for generating an adaptive baseline trend of the measured physiologic parameters corresponding to a first time period;

     means for generating a short term trend of the measured physiologic parameters

corresponding to a second time period less than the first time period; and

     means for generating a metric of physiologic parameter change between the adaptive baseline trend and one of a most recent measured physiologic parameter and the short term trend of the measured physiologic parameters.

2.   The implantable medical device of claim 1, wherein the metric is a difference between the adaptive baseline trend and the short term trend of the measured physiologic parameters.

3.   The implantable medical device of claim 1, wherein the metric is an accumulated difference between the adaptive baseline trend and the most recent measured physiologic parameter.

4.   The implantable medical device of claim 3, wherein the metric is set to zero when the short term trend intersects the adaptive baseline trend.

5.   The implantable medical device of claim 1, wherein the adaptive baseline trend is initially generated using a first computation scheme and is subsequently generated using a second computation scheme different from the first computation scheme.

6.   The implantable medical device of claim 5, wherein the first computation scheme is performed at a first rate and the second computation scheme is performed at a second rate less that the first rate.

7.   The implantable medical device of claim 6, wherein the first rate is computed in response to a predetermined number of the generated measured physiologic parameters.

8.   The implantable medical device of claim 1, wherein the short term trend is initially generated using a first computation scheme and is subsequently generated using a second computation scheme different from the first computation scheme.

9.   The implantable medical device of claim 8, wherein the first computation scheme is performed at a first rate and the second computation scheme is performed at a second rate less that the first rate.

10.   The implantable medical device of claim 9, wherein the first rate is computed in response to a predetermined number of the generated measured physiologic parameters.

11.   The implantable medical device of claim 1, further comprising means for comparing the metric of physiologic parameter change to a predetermined threshold and determining corresponding significant events in response to the comparing.

12.   The implantable medical device of claim 11, wherein the significant events include one of storing data within the implantable medical device, apply or modifying a delivered therapy, notifying the patient, notifying medical personnel, and modifying frequency of physiologic parameter measurement.

13.   The implantable medical device of claim 1, further comprising means for updating the short term trend by generating a weighted sum of the short term trend for two previous days and the measured physiologic parameter generated for the current day and the two previous days.

14.   The implantable medical device of claim 1, further comprising means for updating the adaptive baseline trend by setting the adaptive baseline trend equal to a previous adaptive baseline trend reduced by a predetermined downdrift in response to the current adaptive baseline trend being greater than the current short term trend, and by setting the adaptive baseline trend equal to the previous adaptive baseline trend increased by a predetermined updrift in response to the current adaptive baseline trend being less than the current short term trend.

15.   The implantable medical device of claim 12, wherein the determined significant events are subsequently terminated in response to the short term trend intersecting the adaptive baseline trend.

16.   The implantable medical device of claim 1, wherein the measured physiologic parameters are generated a predetermined number of days prior to generation of the adaptive baseline trend and the short term trend.

17.   A method for detection of changes in physiologic parameters a patient, comprising:
        generating measured physiologic parameters;
        generating an adaptive baseline trend of the measured physiologic parameters corresponding to a first time period;
        generating a short term trend of the measured physiologic parameters corresponding to a second time period less than the first time period; and

generating a metric of physiologic parameter change between the adaptive baseline trend and one of a most recent measured physiologic parameter and the short term trend of the measured physiologic parameters.

18.   The method of claim 17, wherein the metric is a difference between the adaptive baseline trend and the trend of the measured physiologic parameters.

19.   The method of claim 17, wherein the metric is an accumulated difference between the adaptive baseline trend and the most recent measured physiologic parameter.

20.   The method of claim 19, further comprising setting the metric to zero when the short term trend intersects the adaptive baseline trend.

21.   The method of claim 17, wherein the adaptive baseline trend is initially generated using a first computation scheme and is subsequently generated using a second computation scheme different from the first computation scheme.

22.   The method of claim 21, wherein the first computation scheme is performed at a first rate and the second computation scheme is performed at a second rate less that the first rate.

23.   The method of claim 22, wherein the first rate is computed in response to a predetermined number of the generated measured physiologic parameters.

24.   The method of claim 17, wherein the short term trend is initially generated using a first computation scheme and is subsequently generated using a second computation scheme different from the first computation scheme.

25.   The method of claim 24, wherein the first computation scheme is performed at a first rate and the second computation scheme is performed at a second rate less that the first rate.

26.   The method of claim 25, wherein the first rate is computed in response to a predetermined number of the generated measured physiologic parameters.

27.   The implantable medical device of claim 17, further comprising comparing the metric of physiologic parameter change to a predetermined threshold and determining corresponding significant events in response to the comparing.

28.   The method of claim 27, wherein the significant events include one of storing data within the implantable medical device, apply or modifying a delivered therapy, notifying the patient, notifying medical personnel, and modifying frequency of physiologic parameter measurement.

29.   The method of claim 17, further comprising updating the short term trend by generating a weighted sum of the short term trend for two previous days and the measured physiologic parameter generated for the current day and the two previous days.

30.   The method of claim 17, further comprising updating the adaptive baseline trend by setting the adaptive baseline trend equal to a previous adaptive baseline trend reduced by a predetermined downdrift in response to the current adaptive baseline trend being greater than the current short term trend, and by setting the adaptive baseline trend equal to the previous adaptive baseline trend increased by a predetermined updrift in response to the current adaptive baseline trend being less than the current short term trend.

31.   The method of claim 28, wherein the determined significant events are subsequently terminated in response to the short term trend being equal to the adaptive baseline trend.

32.   The method of claim 20, wherein the measured physiologic parameters are generated a predetermined number of days prior to generation of the adaptive baseline trend and the short term trend.

33.   The method of claim 18, wherein the physiologic parameter is one of pressure, heart rate variability and level of activity.

34.   An implantable medical device for detection of changes in physiologic parameters, comprising:

      means for generating measured physiologic parameters;

      means for generating an adaptive baseline trend of the measured physiologic parameters corresponding to a first time period;

      means for generating a short term trend of the measured physiologic parameters

corresponding to a second time period less than the first time period; and

      means for generating a metric of physiologic parameter change between the adaptive baseline trend and one of a most recent measured physiologic parameter and the short term trend of the measured physiologic parameters, wherein the physiologic parameter is one of pressure, heart rate variability and level of activity.

35.   The implantable medical device of claim 34, wherein the metric is a difference between the adaptive baseline trend and the short term trend of the measured physiologic parameters.

36.   The implantable medical device of claim 34, wherein the metric is an

accumulated difference between the adaptive baseline trend and the most recent measured physiologic parameter.

37.   The implantable medical device of claim 36, wherein the metric is set to zero when the short term trend intersects the adaptive baseline trend.

38.   The implantable medical device of claim 34, wherein the adaptive baseline trend is initially generated using a first computation scheme and is subsequently generated using a second computation scheme different from the first computation scheme.

39.   The implantable medical device of claim 38, wherein the first computation scheme is performed at a first rate and the second computation scheme is performed at a second rate less that the first rate.

40.   The implantable medical device of claim 39, wherein the first rate is computed in response to a predetermined number of the generated measured physiologic parameters.

41.   The implantable medical device of claim 34, wherein the short term trend is initially generated using a first computation scheme and is subsequently generated using a second computation scheme different from the first computation scheme.

42.   The implantable medical device of claim 41, wherein the first computation scheme is performed at a first rate and the second computation scheme is performed at a second rate less that the first rate.

43. The implantable medical device of claim 42, wherein the first rate is computed in response to a predetermined number of the generated measured physiologic parameters.

44. The implantable medical device of claim 34, further comprising means for comparing the metric of physiologic parameter change to a predetermined threshold and determining corresponding significant events in response to the comparing.

45. The implantable medical device of claim 44, wherein the significant events include one of storing data within the implantable medical device, apply or modifying a delivered therapy, notifying the patient, notifying medical personnel, and modifying frequency of physiologic parameter measurement.

46. The implantable medical device of claim 34, further comprising means for updating the short term trend by generating a weighted sum of the short term trend for two previous days and the measured physiologic parameter generated for the current day and the two previous days.

47. The implantable medical device of claim 34, further comprising means for updating the adaptive baseline trend by setting the adaptive baseline trend equal to a previous adaptive baseline trend reduced by a predetermined downdrift in response to the current adaptive baseline trend being greater than the current short term trend, and by setting the adaptive baseline trend equal to the previous adaptive baseline trend increased by a predetermined updrift in response to the current adaptive baseline trend being less than the current short term trend.

48. The implantable medical device of claim 45, wherein the determined significant events are subsequently terminated in response to the short term trend being equal to the adaptive baseline trend.

49.   The implantable medical device of claim 34, wherein the measured physiologic parameters are generated a predetermined number of days prior to generation of the adaptive baseline trend and the short term trend.

50.   A computer readable medium having computer executable instructions for performing a method comprising:

generating measured physiologic parameters;

generating an adaptive baseline trend of the measured physiologic parameters corresponding to a first time period;

generating a short term trend of the measured physiologic parameters corresponding to a second time period less than the first time period; and

generating a metric of physiologic parameter change between the adaptive baseline trend and one of a most recent measured physiologic parameter and the short term trend of the measured physiologic parameters.

51.   The computer readable medium of claim 50, wherein the physiologic parameter is one of pressure, heart rate variability and level of activity.

52.   The implantable medical device of claim 14, wherein the updrift is greater than the downdrift.

53.   The implantable medical device of claim 14, wherein the downdrift is greater than the updrift.

54.   The method of claim 30, wherein the updrift is greater than the downdrift.

55.   The method of claim 30, wherein the downdrift is greater than the updrift.

56.   The implantable medical device of claim 47, wherein the updrift is greater than the downdrift.

57.   The implantable medical device of claim 47, wherein the downdrift is greater than the updrift.